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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,070	08/28/2001	Miquel Boleda	60011821Z149	6507
38367	7590	05/16/2005	EXAMINER	
JOHN GARY SALLS 793 WINTERBERRY DRAW WOODBURY, MN 55125			TRAN, HUAN HUU	
			ART UNIT	PAPER NUMBER

2861

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/942,070

Applicant(s)

BOLEDA ET AL.

Examiner

Huan H. Tran

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-20 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                       |                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are informal, which contains handwritings. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7, 21, 22/21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1 and 21 appear to be misdescriptive regarding the limitation “respective transmission distances from the source to the sensor” (claim 1 at line 14; claim 21 at line 18). First of all, “the source” lacks antecedent basis. Secondly, it is understood that the transmission distances should be from the platen or such medium to the sensor as recited at line 10 of claim 1 or at line 13 of claim 21.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nakamura (JP 09-029958).

As to claim 1, with reference to Figs. 1-3 and paragraphs [0010] to [0013] in particular, Nakamura discloses an apparatus for printing images on a printing medium, by construction from individual marks; said apparatus comprising:

a platen (6) locating such medium (p);

at least one printhead (2) marking on such medium;

a carriage (3) holding the head;

a rod (7) supporting the carriage for scanning motion across such medium;

a sensor (34), at least partially mounted to the carriage, measuring relative distances between the sensor and the platen or such medium (see Fig. 3); said sensor comprising first processor portions (34, 35) interpreting intensity of reflected radiation, at each of plural positions along the scanning motion respectively, as a measure of respective transmission distances from the source to the sensor via reflection from the platen or such medium; and

second microprocessor portions (operating part 31a) modifying the marking by the head to compensate for variation of the measured distances during the scanning motion.

Art Unit: 2861

As to claim 2, although the sensor 34 is not explicitly disclosed to include the structural limitations recited in claim 2, it is submitted that such limitation are inherent in the disclosed optical sensor 34 for emitting radiation toward the paper p and receiving reflected radiation from the paper p.

As to claim 4, Nakamura teaches the limitation “wherein the sensor comprises means for measuring the relative distances without printing on such medium” in the cited passages of the reference.

As to claim 5, Nakamura clearly teaches the limitation “the sensor comprises means for measuring the relative distances at multiple positions substantially along the length of the rod”. See Fig. 3 and the description thereof.

#### *Allowable Subject Matter*

5. Claims 3, 6, 7, 21-22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

6. Claims 8-9, 10-15, 16-20 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 8 and 9 are allowable for the reason that Nakamura et al does not teach or suggest the use of a single-channel optical sensor operating with substantially incoherent light as the sensor in the disclosure.

Art Unit: 2861

Claim 10 and dependent claims thereof are allowable for the reason that prior art of record, in particular Nakamura et al, does not teach that the intensity variations of the reflected radiation as directly due to attenuation in travel of the radiation through the distance from the carriage toward the printing medium position and back to the carriage.

Claim 16 and dependent claims thereof are allowable for the reason that prior art of record do not teach or suggest the claimed method steps.

As to claim 21, prior art of record do not appear to teach or suggest the limitation “a carriage scanning lengthwise along the array” and the limitation “a sensor, at least partially mounted to the carriage, measuring relative distances between the sensor and the platen or such medium”.

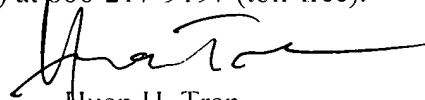
As to claim 22, prior art do not further teach or suggest the limitation “the carriage carries exclusively the sensor or portions thereof, not the array”.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan H. Tran whose telephone number is (571) 272-2261. The examiner can normally be reached on at work on W-F from 6:30 to 5; T are telework days.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2861

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Huan H. Tran  
Primary Examiner  
Art Unit 2861

hht  
05/12/2005